

I will do the same thing. I will approach my own inquiry as open-mindedly as I can. I know you will, too.

Sincerely,

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President and CEO

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HOWARD DEAN, M.D.
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December 17, 1999

William E. Kennard, Chairman
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: Internet Ventures, Inc. and Internet On-Ramp, Inc. - Petition for Declaratory Ruling that Internet Service Providers are Entitled to Leased Access to Cable Facilities under Section 612 of the Communications Act of 1934, as Amended Case No. CSR-5407-L

Dear Chairman Kennard,

I write to urge favorable action on the petition of Internet Ventures, Inc. (IVI) that has been supported by the Vermont Department of Public Service concerning leased access to cable facilities under Section 612 of the Communications Act, as amended. I understand that FCC action on the petition is imminent.

The cable industry is deploying technology which can have a profound effect on the ability of average Americans to access the Internet and all its wonders. These wonders include the ability to deliver a rich variety of local and even global video programming — if Internet Service Providers (ISPs) are given access to high speed cable. Without positive action on the IVI petition, however, Vermonters and many other Americans — particularly rural America (where DSL technology is largely unavailable) — will not realize these benefits any time soon.

I have read of and commend your efforts to encourage cable companies to open their systems to ISPs voluntarily. I also applaud your success in encouraging AT&T to commit — albeit on a non-binding and limited basis — to open its system some time in the next few years. Even this limited change in AT&T's policy couldn't have taken place without the implicit threat of regulation that your efforts represented.

William F. Kennard, Chairman
Washington, D.C.

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Reliance on the voluntary cooperation of cable companies, however, even under the threat of regulation, simply isn't enough. For one thing, AT&T's promise is of no benefit to Vermont, where 90 percent of cable subscribers rely on Adelphia, a company that remains adamantly opposed to providing ISPs access to its system. As important, even AT&T has made clear that its voluntary commitments do not include allowing ISPs to offer video programming that would compete with its cable business.

But this is exactly the reason Congress had the Commission adopt leased access regulations: to require cable companies to lease their channel capacity to unaffiliated video programmers. Those regulations exist because Congress and the Commission have concluded that cable companies have monopoly power and will not voluntarily lease cable channels to independent video programmers. ISPs are the biggest video programming threat to cable's monopoly over video programming. Granting ISPs leased access to cable facilities will further competition in video programming, as Congress intended. Your positive action on this petition can bring the benefits of this competition to Vermonters and millions of other Americans.

Pursuant to Section 1.1206 of the Commission's Rules, an original and two (2) copies of this *ex parte* presentation are being submitted in the above-noted proceeding.

Sincerely,



Howard Dean, M.D.
Governor

HTD/ja

cc: Commissioner Ness
Commissioner Furchtgott-Roth
Commissioner Tristani
Commissioner Powell

AOL, Time Warner Plan ISP Deals

By Alec Klein
 Washington Post Staff Writer
 Wednesday, November 15, 2000 ; Page E01

America Online Inc. and Time Warner Inc. are moving to strike deals giving some of their biggest Internet rivals access to cable television lines in an attempt to win government approval of their merger, according to sources familiar with the negotiations.

In recent days, Time Warner and AOL, the world's dominant Internet service provider, have stepped up talks with one-time nemesis EarthLink Inc., the nation's second-largest ISP, sources said. AOL and Time Warner also are trying to put the finishing touches on a proposed contract with Juno Online Services Inc., the third-largest ISP in the country, Juno's chief executive confirmed yesterday in an interview.

Both deals would give the AOL competitors access to Time Warner's extensive cable television network for Internet service.

The Federal Trade Commission last week gave Dulles-based AOL and Time Warner of New York up to three weeks to satisfy its concerns about competition in the marketplace, or else the government likely will go to court to block the \$183 billion deal.

Some at the FTC want the companies to sign a cable-access deal with a competitor before the merger is approved, sources have said. By doing so, federal officials could review the contract to make sure the terms are fair and nondiscriminatory.

Under one scenario, the FTC would require that the companies offer terms in any deal that are at least as favorable as those in their initial contract with an ISP. Such a benchmark would free the federal agency from having to closely monitor the companies after the merger is approved. The two sides have discussed a settlement in which the combined company would sign one competing ISP in each of Time Warner's cable markets and eventually open up the lines to two more unaffiliated competitors.

Time Warner spokesman Edward Adler declined to comment. AOL officials declined comment as well.

In July, Time Warner announced that it had a letter of intent that would allow Juno to offer its online service over Time Warner's cable lines. For months, negotiations moved slowly, but now a 30-to-40-page contract is close to being signed, said Juno's chief executive, Charles E. Ardai.

Ardai declined to discuss the specifics of the agreement with Time Warner, but he said that "in rough outline" the deal is similar to Juno's contracts with telecommunications vendors that provide Internet service over telephone lines. Juno pays the vendors, such as WorldCom Inc., fees for the use of their networks, based on the amount of time Juno subscribers spend online. In the case of Time Warner, the fee would not be based on user time, but on the number of users on the cable line, he said.

Ardai also indicated that the deal would require revenue sharing that would be based in part on

whether the customer is signed up by Juno, or Time Warner.

New York-based Juno gets about 60 percent of its revenue from subscription fees and the rest from advertising and other e-commerce fees. Juno, which generated about \$30 million in revenue in its third quarter, said it had 3.7 million active subscribers as of Sept. 30., of which 2.95 million get access for free. About 750,000 subscribers pay for Juno's premium online service, which costs about \$10 a month.

The Juno chief, however, said some issues remain to be resolved, including whether Time Warner will offer more favorable financial terms to its own Internet service after the merger is completed.

"Will they use their position of power to give their own house [Internet] service an unfair competitive advantage not only over Juno but over others?" Ardai said.

He said another concern is how Time Warner will require Juno to connect to its cable network. "Will Time Warner say in order to participate, you have to put hardware in 4,000 or 10,000 locations, which would be prohibitively expensive," he said. "That could interfere with the open-access offer being a real offer."

Juno is slated to participate in Time Warner's open-access trial run in Columbus, Ohio. The test, which would connect nonaffiliated ISPs to Time Warner's network, is expected to take place in the next 30 days, sources said.

Meanwhile, EarthLink officials declined to comment on their negotiations. But sources said the terms being offered are better than previous proposals offered recently by Time Warner.

The negotiations represent a reversal from September when EarthLink accused Time Warner of offering terms so onerous it called into question AOL and Time Warner's commitment to open access. Atlanta-based EarthLink has about 4.6 million online subscribers, about one-sixth the size of AOL.

Time Warner had offered some ISPs access to its cable lines but only if Time Warner received 75 percent of their revenue from all subscriptions and 25 percent of their revenue from other sources, including e-commerce transactions.

AOL and Time Warner have also pursued a cable-access deal with Denver-based RMI.Net, officials of the regional ISP confirmed yesterday.

"We have had some informal conversations with them," said RMI spokesman Jeremy Bronson, but he added that they have not engaged in "formal negotiations."

RMI, which has more than 100,000 subscribers, is set to participate with Juno in Time Warner's Ohio trial. "The next step from there will be to look at the business terms," Bronson said.

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Time Warner Term Sheet for ISP/TWC Broadband ISP Service

This term sheet (the "Term Sheet") is a list of key business points that are intended to be memorialized in a definitive agreement (the "Definitive Agreement") between Time Warner Cable ("TWC") and the Internet Service Provider (the "ISP") identified below. Except for the provisions of Section 21 of this Term Sheet, this Term Sheet is not intended to create any rights for, or impose obligations upon, either party including without limitation any obligation to negotiate in good faith.

1. Service

The "Service" will be ISP's Internet access, content, applications and functionality delivered over TWC's broadband cable infrastructure, as jointly provided by the parties within the Network Architecture to be specified by TWC in the Definitive Agreement. The Service will be tiered based on a maximum line speed and overall consumption of bits per billing period. Initially, the parties will offer two tiers of Service. The maximum line speeds for the lower tier Service will be 2mbps, downstream, and 384 kbps, upstream. Line speeds for the initial higher tier of Service, and bit consumption for both initial tiers of Service will be specified in the Definitive Agreement. Following execution of the Definitive Agreement, the parties may modify the foregoing service specifications and/or add service levels solely upon mutual agreement..

The Service will be optimized for the personal computer, but the parties understand that the Service may be capable of working on another device if so connected by a customer. TWC's obligations under the Definitive Agreement will be limited to a customer's use of the Service through a personal computer.

2. Non-Exclusive. The parties' rights and obligations under the Definitive Agreement will be non-exclusive.

3. Scope and Rollout. The rollout of the Service will be on a TWC divisional level, except with respect to the National Division, for which rollout will be on a cable system by cable system level (Each division, and in the case of the National Division, each system, may be referred to herein as an "Operator"). Each Operator will have the option (but not the obligation) to rollout the Service to potential customers in its operating area, subject to ISP's agreement to offer the Service through such Operator and

subject also to ISP's payment of the Advance (as defined herein) with respect to each Operator that offers the Service Rollouts will occur 30 days after the Operator determines that its cable systems are capable of providing the Service. TWC will have the right to terminate the Definitive Agreement with respect to Operators which are divested or are no longer under management by TWC. Systems which are acquired by TWC after the effective date of the Definitive Agreement but during the term thereof will have the option to offer the Service under the terms of the Definitive Agreement.

4. Distribution. Each of ISP and TWC will sell the Service and will determine the pricing of the Service when sold by it.

5. Subscriber Revenue Splits. TWC shall retain seventy-five percent (75%) of gross Service subscription revenues and ISP shall receive twenty-five percent (25%) thereof. Notwithstanding the foregoing, for subscriptions to the lower tier Service: (a) TWC shall receive a minimum monthly payment of \$30 for each subscription sold by ISP to existing TWC cable television service subscribers; and (b) ISP shall receive a minimum monthly payment of \$10 for each subscription sold by TWC. TWC shall be entitled to higher minimum monthly payments, specified in the Definitive Agreement, with respect to subscriptions sold by ISP to customers who are not TWC cable television service customers.

6. Service Home Page. ISP will have sole control of, and responsibility (including without limitation editorial and technical responsibility) for the homepage for the Service, provided however that: (a) the home page will be subject to TWC's approval; and (b) at all times during the term of the Definitive Agreement there will be a dedicated availability of prominent above-the-fold areas on the home page of the Service for use by the Operator in its discretion, but which may, without limitation link to content, applications, services and functionality provided by such Operator. The Operator presence on the home page for the Service shall be defined in the Definitive Agreement.

7. Advertising and Other Fees. TWC will receive twenty-five percent (25%) of gross revenues received by ISP for advertising, transactions, communications, premium services, e-commerce and other fees (e.g. web hosting surcharges) related to ISP's ability to offer the Service ("Ancillary Revenues"). Except as expressly set out in this Term Sheet, all revenues generated by the Operator in connection with the Service and whether or not through the Service Home Page (including advertising,

transactions, communications, premium services, e-commerce and other fees and service revenues) will be retained by TWC.

8. Advance. ISP will pay TWC an advance payment to be recouped against revenues to be received by TWC under the Definitive Agreement in the amount of dollars (\$____) for each Operator which the parties agree shall offer the Service (the "Advance"). The Advance will be due and payable thirty (30) days following ISP's receipt of notice from TWC that the Pre-Existing Obligations have terminated. The Advance will be applied to revenues due to TWC hereunder until such advance had been fully recouped, at which time TWC and ISP shall make appropriate payments as set forth herein. The advance is refundable upon expiration of the Agreement, provided however that in the event the Definitive Agreement terminates for any reason before TWC has earned at least \$50,000. TWC will be entitled to retain an amount equal to the difference between \$50,000 and the actual amounts earned by TWC under the Definitive Agreement.

9. Minimum Subscriber Level. TWC will have the right to terminate the Definitive Agreement with respect to any particular Operator after one year from the commencement of rollout by such Operator unless the Service has, upon the one-year anniversary of the rollout, in such Operator's operating area, a number of subscribers equal to the greater of (a) 100 or (b) .5% of homes passed by the particular Operator.

10. Marketing and Service Packages. ISP will market and promote the availability of the Service. TWC may package the Service with TWC's other services, subject to the terms and conditions of the Definitive Agreement, including without limitation the payment of minimum fees.

11. Facilities.

TWC will be responsible for all aspects of the Service infrastructure facilities from a point of demarcation at the Operator headend to Service subscribers. TWC will provision and install (except to the extent that self-provisioning is available) the Service for users using personal computers to utilize the Service.

Whichever party sells the Service to a customer will determine whether it wishes to charge an installation fee. Notwithstanding the foregoing, if ISP sells the Service, ISP will reimburse TWC, at TWC's cost without markup, for TWC's direct costs (including labor and equipment) of provisioning and installing the Service.

ISP will be responsible for all aspects of the Service, infrastructure facilities, software, hosting, caching, peering and general Internet connectivity and transport to the point of demarcation at the Operator headend. ISP's transport facilities to the TWC headends will meet maximum and minimum capacity specifications as will be specified in the Definitive Agreement. If tunneling protocols are used, the tunnels will terminate at TWC headend. ISP will be responsible for obtaining and managing blocks of IP addresses to support the Service.

The Definitive Agreement will set forth minimal technical performance requirements with which the ISP must comply. The Definitive Agreement will provide for appropriate credits for Service outages caused by failure of either party's facilities to meet specifications. If outages or performance failures reach a specified level, or if the ISP does not respond reasonably to increased volume or usage of the Service in any particular operating area, TWC may terminate the Definitive Agreement with respect to the Operators in such areas.

12. Billing and Customer Service.

TWC will invoice the customers to which it sells the Service. ISP shall have the option to invoice customers to which it sells the Service, or to have TWC invoice such customers at a monthly billing charge payable by ISP of \$.50 per Service subscriber invoiced. The invoicing party will remit payment to the other party for the other party's share of subscriber revenues no later than 30 days after the end of month in which such revenues were received from Service customer. If a TWC invoiced customer pays only a partial payment, the payment will be allocated proportionately among the Service and other TWC services, with TWC remitting twenty-five percent (25%) of the amount allocated to the Service to ISP (subject to minimum payments as set forth herein). TWC will have sole discretion over Subscriber termination policies, including without limitation for non-payment. ISP will remit to payment to TWC for TWC's share of Ancillary Revenues no later than 30 days after the end of the month in which ISP received such revenues.

The Definitive Agreement will define "Tier I" and "Tier II" issues. Each party will handle any Tier I calls or emails directed to it, with a handoff to the other party if necessary. ISP will handle Tier II customer service, except that TWC will handle Tier II customer service for those aspects of the service and facilities TWC is responsible for providing.

13. Local Franchise Requirements. ISP will agree to abide by the terms of any local franchise obligation regarding the provision of the Service on the TWC cable systems that, in TWC's judgment, are applicable to it, including, without limitation (x) charging and remitting to TWC for payment to local franchise authorities (or, if directed by TWC, paying to franchise authorities directly) the applicable franchise fee on the Service when sold by ISP; and (y) complying with any customer service, disclosure, quality of service and other requirements (including providing subscribers with copies of the privacy policy); and (z) the provision of the Service to persons, places or institutions without charge. TWC will provide ISP with notice of such requirements and the parties will cooperate on such compliance matters.

14. Privacy. Each party will comply, and assist the other in complying, with all applicable laws and regulations respecting collection, use, disclosure and protection of subscriber information. TWC shall use reasonable efforts to comply with ISP's customer privacy policies, provided however that to the extent ISP's privacy policies are inconsistent with, and in some way a limitation on TWC's current or anticipated business uses of such information, ISP agrees to take whatever action necessary to modify its policies with respect to conform with TWC's business objectives.

15. Customer Policies and Procedures. The parties will agree upon policies and procedures to be maintained by each of them with regard to the customers, for the benefit of each other and the customers. Areas will include, without limitation, (i) acceptable use policies; (ii) procedures to enable each party to take advantage of the notice and takedown provisions of the Digital Millennium Copyright Act; (iii) procedures for other takedowns of posted content and denial of service; (iv) response to subpoenas; (v) response in emergency situations; and (vi) minimum standard service terms, including limitations of liability for the benefit of both parties.

16. Video Streaming: Telephony. Video streaming and telephony will be permitted as part of the Service, subject to the following provisions:

The Service will not include any local telephony services requiring special gateways, powering, software or equipment, or that otherwise could cause TWC to be subject to regulation as a common carrier of telecommunications services by any state

public utilities commission, the FCC or otherwise, or other adverse regulatory consequence.

TWC will not be required to provide QoS support for telephony or video streaming for the Service QoS may be provided upon request and at an additional cost.

To the extent ISP wishes to offer any functionality as part of the Service which: (a) is outside the scope of the Network Architecture; (b) requires an Operator acquire equipment or software or implement a change in the way the Operator processes, TWC shall have the right to approve such new functionality, provided however that in the event TWC approves such functionality, ISP will be obligated to reimburse for TWC its direct, out-of-pocket costs in implementing such new functionality.

17. Term. With respect to each Operator, three years from launch of the Service by such Operator.
18. Responsibility. Subject to any restrictions and exceptions specified in the Definitive Agreement, ISP will have control over and responsibility for all content, applications, functionality and services included in the Service, except that TWC will have control over and responsibility for the portion of the Service allocated to the TWC local service.
19. Subject to Pre-existing Obligations. Any Definitive Agreement which the parties may reach will be subject to TWC's compliance with pre-existing obligations, including those with ServiceCo LLC d/b/a/ Road Runner, as described in the Memorandum of Understanding dated February 29, 2000 between AOL and Time Warner (the "Pre-Existing Obligations").
20. Costs. Except as specifically provided in the Definitive Agreement, or as otherwise agreed by the parties, each party will bear the costs of performing its obligations.
21. Confidentiality. ISP agree to keep the Term Sheet, any of the terms set forth herein, and any discussions with respected to the contemplated arrangement confidential, and ISP agrees not to disclose such information to any person except employees or agents of ISP with a need to know in connection with services they provide to ISP. Each party agrees not to make any press release or public announcement mentioning the other party's name or identity without such other party's express written consent. The provisions of this Section 21 are intended to be

binding.

**Before The
Federal Communications Commission
Washington, DC**

In the Matter of)	
)	
Inquiry Concerning High-Speed)	
Access to the Internet Over)	GN Docket No. 00-185
Cable and Other Facilities)	

NOTICE OF INQUIRY

Affidavit of

**NELS PEARSALL
KEITH REUTTER, AND
ROBERT A. SINCLAIR**

I. INTRODUCTION

1. I, Robert A. Sinclair, am an economist and Director at Micronomics. I have a Ph.D. in economics from the University of Pittsburgh. My major fields of expertise include industrial organization, antitrust, regulation, statistical analysis, and microeconomic theory. I have been an economic consultant since 1993 and have provided expert testimony in a number of jurisdictions on matters relating to competition, prices, and cost of service in regulated network industries. I have published articles in academic and professional journals on economics, law, and regulation. These articles appear in *The Review of Industrial Organization*, *The Dickinson Law Review*, and *The Electricity Journal*. I have also spoken on technical and policy matters before the

American Gas Association, the National Association of State Utility Consumer Advocates, and the Institute of Public Utilities. I have taught university courses in industrial organization, antitrust, and microeconomic theory. My biographical summary is set forth at Exhibit 1.

2. I, Keith A. Reutter, am an economist and Director at Micronomics. I hold a Ph.D. in economics from Auburn University. My major fields of expertise include industrial organization, regulation, microeconomic theory, and econometrics. I have provided economic analysis and consulting services since 1995 pertaining to a variety of industries, including network industries and public utilities. I have written and published articles related to economics and regulation. My biographical summary is set forth at Exhibit 2.

3. I, Nels Pearsall, am an economic consultant and Managing Director at Micronomics. I have been engaged in economic research and consulting since 1989. I have managed groups and directed research for a broad range of economic matters, including private antitrust cases and matters before various government agencies. My experience includes cases in attempted monopolization, analyses of entry, predatory pricing, price-fixing, price discrimination, and the exercise of market power. In addition to economic analysis of liability issues, I have provided estimated damages associated with antitrust practices. My biographical summary is set forth at Exhibit 3.

II. ASSIGNMENT

4. We have been asked by the Competitive Access Coalition to provide an opinion regarding certain economic issues relating to elements of the Notice of Inquiry (“NOI”) of the Federal Communication Commission (“FCC”) concerning

high-speed access to the internet over cable and other facilities (GN Docket No. 00-185). In particular, we have been asked to address the effectiveness of market-based and regulatory approaches in promoting competition in the provision of broadband Internet service. Our analysis focuses on how efficient and effective competition can be advanced in light of the market structure and other economic conditions in the industry.

5. The following is a description of each entity comprising the Competitive Access Coalition:

- The **National Association of State Utility Consumer Advocates** is an association of 41 consumer advocate offices in 39 states and the District of Columbia.
- The **Texas Internet Service Providers Association** is an industry association that represents the interests of the approximate 600 ISPs in Texas.
- **Amigo.net** is an Internet service provider located in Alamosa, Colorado. Amigo.Net provides local dial up service to rural communities in an area covering approximately 1/3 of the State of Colorado.
- **CyberZone, Inc.** is an ISP serving Marinette and Oconto Counties in Wisconsin and Menominee County in Michigan. It has been in business for five years and has a subscriber base of over 5000 customers.
- **BrandX Internet LLC** is an ISP headquartered in Santa Monica, California and serves customers in southern California. It has been in

business for six years and has a subscriber base of dial up, T1 and DSL customers.

- **LABridge** is an ISP headquartered in Marina Del Rey, California and serves customers in southern California offering Internet service via dial up and DSL.
- The **Citizen Utility Ratepayer Board of Kansas** is the consumer advocate for the state of Kansas.
- The **National Association of Towns and Townships** is an association of local governmental units that works to strengthen the effectiveness of town and township government.
- The **Utilities Commission, City of New Smyrna Beach** is a municipal electric and water utility that also operates an ISP.
- **Citizen Power, Inc.** is a non profit, public policy research, education, and advocacy organization that promotes public understanding of, and involvement in, socio-cultural, economic and environmental issues, and policy development.
- **NorthNet** is an ISP headquartered in Oshkosh, Wisconsin and provides dial up service in Fond Du Lac, Oshkosh, Mensasha, Neenah, Appleton, and Green Bay, Wisconsin.

III. SUMMARY AND CONCLUSIONS

6. The key relevant market in this case is the broadband network access market. The broadband network access market is an essential input into the provision of broadband Internet access for end users. ISPs require the use of the broadband network access market in order to provide broadband Internet access to end users.

7. With respect to economic policy, we have concluded that the efficient way to provide broadband Internet access is to allow multiple ISPs to offer competitive services using the cable broadband network. We also have concluded that affiliation between the cable broadband network owner and an ISP creates the incentive and opportunity for the network owner to use control of the network to preclude other ISPs. We have further concluded that ISP competition along with its attendant cost and technology benefits would best be accomplished by means of regulated access rates and open-access policies applied to broadband network access.

IV. MARKET DEFINITION AND MARKET STRUCTURE

8. To analyze the economic issues involved in the open-access debate, we first define the *relevant market*. Economists define relevant markets in order to facilitate a focused analysis of the economic relationships that are important in a given economic situation. In this instance, defining relevant markets allows us to focus on broadband Internet access and to evaluate how alternative policies will affect competition, costs, and technology.

9. In defining relevant markets, economists consider substitutability of the product (or service) in question. Section 1 of the Department of Justice (“DOJ”) and Federal Trade Commission (“FTC”) Merger Guidelines sets out well-accepted market definition principles using a “hypothetical monopolist”¹ approach. Under this approach, economists attempt to determine whether a hypothetical monopolist of the product in question can impose a small but profitable price increase. If a price increase results in customers seeking alternative supplies in sufficient numbers to make the price increase unprofitable, the hypothetical monopolist does not control a sufficient number of close substitutes to consider that group of products to be a relevant market. Consumers would turn from the hypothetical monopolist and purchase viable alternatives, undercutting the monopolists’ pricing power. If on the other hand, the price increase is profitable, the products controlled by the hypothetical monopolist could be considered as part of the same relevant market.

10. We initiated our analysis by first considering the extent to which broadband network access provided through an existing cable franchisee and broadband network access over Digital Subscriber Lines (“DSL”) are viable substitutes for ISPs seeking to offer broadband Internet service.² While DSL and cable broadband are functionally substitutable, the geographic dispersion of DSL facilities and cable facilities limit the availability of competitive options in certain geographic markets. Cable systems provide service to end-users and therefore must locate where people live (i.e. residential

¹ U.S. Department of Justice and Federal Trade Commission 1992 *Horizontal Merger Guidelines*, Washington, D.C.; reprinted in 4 Trade Reg. Rep. (CCH) §13,104.

² The ISP provides the actual information platform for Internet access. ISPs allow a customer to gain access to multiple information networks, mainly the Internet, but other networks as well. ISP services also include storage for email and other server-based facilities (like a personal web site) as well as electronic content.

areas and suburban areas) while DSL networks are located mostly in areas where commercial activity is high (i.e., commercial districts and urban areas).³ As a result, in many instances the substitutability between DSL and cable broadband will be limited due to availability.⁴

11. If the large numbers of ISPs are able to gain access to broadband networks, it is our belief that the increase in competition will be beneficial. The current problem however, is the lack of competitive alternatives for network access available to ISPs. Most residential customers' access to a broadband network is restricted to a broadband cable system. According to the FCC, as of June 2000, two-thirds of all high-speed connections to residential and small commercial customers were coaxial cable lines. Furthermore, of the areas in which high-speed data services are available, over 43% of those areas were served only by a single high-speed connection.⁵ While the FCC data does not indicate the share of cable lines among these single-supplier areas, in most instances for residential customers, this network will be the monopoly cable franchise. Hence, while competition can prevail among ISPs, competition for broadband network access is limited or non-existent for most residential neighborhoods. But even when alternative network access providers are available to a customer, the market is likely to be highly concentrated. Just about all households and small businesses are connected either

³ Because of technical constraints, DSL service is available only if a residential customer is near enough to a telephone switching station. Hence, the number of customers near enough to a switching station increases as population density increases.

⁴ We also do not consider traditional narrowband "dial up" network access to be an adequate substitute for the broadband network. This is primarily due to the speed of broadband access as compared to narrowband access. While there is some overlap of the services available by these alternative media, with the greater speed, broadband can provide services that would be impossible over narrowband (e.g., video on demand).

to a cable system, a DSL line, or both -- but not more than one cable system or DSL line. Hence, the best competitive scenario possible is duopoly. Indeed, according to the FCC (*Id.*), nearly every geographic area of the U.S. analyzed (85%) are served by at most three high-speed network access providers -- and 76% are served by 2 or less providers. Consequently, even if a cable operator is not the only network access provider, the prospect for competition when just two alternatives are present is not much brighter.

V. COMPETITION POLICY

12. A provider of the essential input could have monopoly power if competitive firms require that input (in this case the broadband network) and the provider can control pricing and output of the final good (in this case residential broadband Internet access). We considered two basic competitive scenarios in our assessment of the optimal policy in this case. Each scenario has an impact on prices and innovation and provides a basis for evaluating the optimal policy response.

A. *Market-Based Pricing and Access*

13. Under a market-based structure, the broadband network owner is not regulated with respect to price or access. In other words, it can charge any price for its network access and is not required to allow competitive access at the ISP level. We assume, for this analysis, the cable owner is integrated with an affiliated ISP. Under this scenario, the typical cable owner can set a monopoly price for residential broadband Internet access and share the monopoly profits with its affiliated ISP.⁶ This outcome

⁵ See "High-Speed Services for Internet Access: Subscribership as of June 30, 2000," FCC Industry Analysis Division, October 2000, Tables 3 and 6, set forth at Exhibit 4, herein.

⁶ It is assumed that the cable owner is the only supplier of network access. We acknowledge that in limited circumstances there may be two suppliers (i.e., duopoly). While duopoly is generally more

results in two unsatisfactory consequences. First, consumers must pay the supra-competitive price for broadband Internet service -- resulting in fewer customers receiving access (due to the high rates) and resulting in prices that are higher than the cost of providing the service.⁷ This is the standard monopoly pricing result that economists almost uniformly disfavor. The second and perhaps the more crucial consequence of this market-based scenario is the fact that the absence of competition will impede the opportunity to advance technology.

14. With competition at the ISP level, there is an increased potential that further innovation in various aspects of Internet technology will be stimulated. These aspects might be otherwise muted under a single integrated supplier regime. In a more competitive environment, individual ISPs will look for ways to differentiate themselves among competitors and will seek to improve service. For example, each ISP could monitor competitors' content and services in an attempt to compete. Additionally, ISPs (or others wishing to sell products to ISPs) might attempt to undertake innovations to differentiate products such as increasing the speed of interconnections along the broadband network and throughout the ISPs' interconnection facilities. The current lack of competition reduces the incentive to innovate among individual ISPs since limited network access is assured.

15. The idea that competition among ISPs will stimulate innovation is a particularly important one in the Internet industry. Competition among various players powered much of the innovation that has occurred within industries involved with the

desirable than monopoly, a duopoly can result in higher than competitive pricing as well, inducing the same, albeit ameliorated, negative consequences as monopoly.